

## **Selected Acquisition Report (SAR)**

RCS: DD-A&T(Q&A)823-374



LCS
As of December 31, 2011

Defense Acquisition Management Information Retrieval (DAMIR)

#### **Table of Contents**

#### **Program Information**

#### Designation And Nomenclature (Popular Name)

Littoral Combat Ship (LCS)

#### **DoD Component**

Navy

#### Responsible Office

#### Responsible Office

CAPT John Neagley Phone 202-781-2132
Naval Sea Systems Command Fax 202-781-4712
614 Sicard St, S.E. DSN Phone 326-2132

Washington Navy Yard, DC 20376-7003 DSN Fax

john.neagley@navy.mil Date Assigned February 21, 2012

#### References

#### SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 7, 2011.

#### Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 7, 2011

#### **Mission and Description**

The Littoral Combat Ship (LCS) will be optimized for flexibility in the littorals as a system of systems that is both manned and unmanned, mission reconfigurable, and deployed in LCS. It will focus on three primary anti-access mission areas: Littoral Surface Warfare operations emphasizing prosecution of small boats, mine warfare, and littoral anti-submarine warfare. Its high speed and ability to operate at economical loiter speeds will enable fast and calculated responses to small boat threats, mine laying and quiet diesel submarines. LCS employment of networked sensors for Intelligence, Surveillance, and Reconnaissance (ISR) in support of Special Operations Forces (SOF) will directly enhance littoral mobility. Its shallow draft will allow easier excursion into shallower areas for both mine countermeasures and small boat prosecution. Using LCS against these asymmetric threats will enable Joint Commanders to concentrate multi-mission combatants on primary missions such as precision strike, battle group escort and theater air defense.

#### **Executive Summary**

The FY 2013 President's Budget submission requests \$1,785 million to procure LCS hulls 13 through 16 in FY 2013. These ships will be awarded under the Block Buy contracts to Lockheed Martin and Austal, USA as part of the FY 2010 - FY 2015 ship procurements.

USS FREEDOM (LCS 1) is continuing with its post delivery test and trials phase. LCS 1 completed the first phase of its Post Shakedown Availability (PSA) and is supporting Developmental Testing (DT) of the Surface Warfare Mission Package.

USS INDEPENDENCE (LCS 2) is also continuing with its post delivery test and trials phase and is currently supporting Mine Countermeasure Mission Package DT.

FORT WORTH (LCS 3) completed builder's sea trials in October 2011 and is now preparing to conduct acceptance trials in April 2012. Delivery is planned for June 2012 followed by commissioning in September 2012 in Galveston, Texas. LCS 3 is approximately 99 percent complete.

CORONADO (LCS 4) launched on January 9, 2012 and was christened on January 14, 2012. As has been progressively reported, launch was delayed to ensure orderly completion of design products and proper sequence of production efforts leading up to planned level of completion at launch (approximately 80 percent). As well, Austal has been affected by a delayed production manning ramp-up carrying over from uncertainties regarding program block buy decisions in 2010. The net effect has been a seven-month delay to the launch. LCS 4 delivery schedule has been revised to March 2013 to reflect these factors.

MILWAUKEE (LCS 5) completed a Detail Design Review (DDR), completed a Production Readiness Review (PRR) and started fabrication on August 5, 2011. Lockheed Martin conducted a lay keel event on October 27, 2011. LCS 5 is continuing in production and is approximately nine percent complete.

JACKSON (LCS 6) completed a DDR, completed a PRR, and started fabrication on August 29, 2011. Austal plans to conduct a lay keel event in September 2012. LCS 6 is continuing in production and is approximately four percent complete.

DETROIT (LCS 7) completed a DDR in November 2011 and is scheduled to conduct a PRR in March 2012, with the start of fabrication planned to begin in approximately April 2012.

MONTGOMERY (LCS 8) conducted a DDR in February 2012 and is scheduled to conduct a PRR in April 2012, with the start of fabrication planned to begin in approximately May 2012.

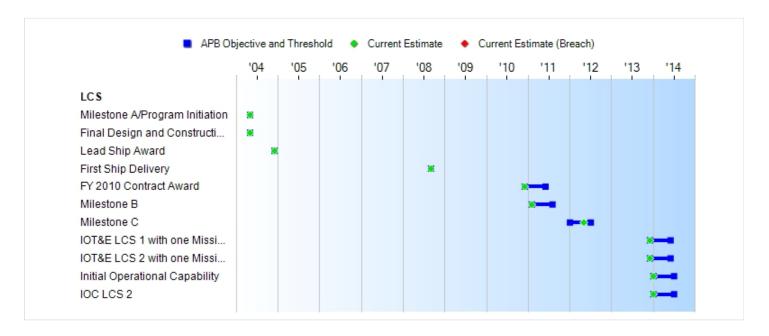
LCS 9 through LCS 12 have been named LITTLE ROCK (LCS 9), GABRIELLE GIFFORDS (LCS 10), SIOUX CITY (LCS 11), and OMAHA (LCS 12).

There are no significant software-related issues with this program at this time.

### **Threshold Breaches**

APB Breaches								
Schedule								
Performance								
Cost	RDT&E							
	Procurement							
	MILCON							
	Acq O&M							
<b>Unit Cost</b>	PAUC							
	APUC							
Nunn-McC	urdy Breache	S						
<b>Current UCR E</b>	Baseline							
	PAUC	None						
	APUC	None						
Original UCR I	Baseline							
	PAUC	None						
	APUC	None						

#### Schedule



Milestones	SAR Baseline Dev Est		ent APB opment	Current Estimate	
		Objective	/Threshold		
Milestone A/Program Initiation	MAY 2004	MAY 2004	MAY 2004	MAY 2004	
Final Design and Construction Contract Award	MAY 2004	MAY 2004	MAY 2004	MAY 2004	
Lead Ship Award	DEC 2004	DEC 2004	DEC 2004	DEC 2004	
First Ship Delivery	SEP 2008	SEP 2008	SEP 2008	SEP 2008	
FY 2010 Contract Award	DEC 2010	DEC 2010	JUN 2011	DEC 2010	
Milestone B	FEB 2011	FEB 2011	AUG 2011	FEB 2011	
Milestone C	JAN 2012	JAN 2012	JUL 2012	MAY 2012	(Ch-1)
IOT&E LCS 1 with one Mission Package	DEC 2013	DEC 2013	JUN 2014	DEC 2013	
IOT&E LCS 2 with one Mission Package	DEC 2013	DEC 2013	JUN 2014	DEC 2013	
Initial Operational Capability	JAN 2014	JAN 2014	JUL 2014	JAN 2014	
IOC LCS 2	JAN 2014	JAN 2014	JUL 2014	JAN 2014	

#### **Acronyms And Abbreviations**

APB - Acquisition Program Baseline

IOC - Initial Operational Capability

IOT&E - Initial Operational, Test and Evaluation

#### **Change Explanations**

(Ch-1) Milestone C planning date revised from JAN 2012 to MAY 2012 to accommodate completion of the updated Test and Evaluation Master Plan.

## Memo

IOC for LCS 1 is achieved when Initial Operational Test and Evaluation (IOT&E) is conducted with any mission package.

IOC for LCS 2 is achieved when IOT&E is conducted with any mission package.

### **Performance**

Characteristics	SAR Baseline Dev Est	Develo	nt APB opment /Threshold	Demonstrated Performance	Estimate
Sprint Speed (kts)	50	50	40	TBD	40 kts
Navigational Draft (ft)	10	10	20	TBD	14ft
Range at Transit Speed (includes payload)	4,300 nm @ 16 kts	4,300 nm @ 16 kts	3,500 nm @ 14 kts	TBD	4,300 nm @ 16 kts
Mission Package Payload (Weight)	210 MT (130 MT) mission package/80 MT mission package fuel)	210 MT (130 MT) mission package/80 MT mission package fuel)	180 MT (105 MT mission package/75 MT mission package fuel)	TBD	180 MT (105 MT) mission package/75 MT mission package fuel)
Core Crew Manning (# Core Crew Members)	15	15	50	TBD	40 Core Crew Members
Net- Ready: The system must support Net-Centric military operations. The system must be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. The system must continuously provide survivable, interoperable, secure, and operationally effective information exchanges to enable a Net-Centric military capability.	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR	TBD	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated

Systems Training Trained-to- Trained-to- Trained-to- Qualify at Trained-to- Qualify at Trained-to- Qualify at	Materiel Availability	identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticatio n, confidentiality , and nonrepudiati on, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticatio n, confidentiality , and nonrepudiati on, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticatio n, confidentiality , and nonrepudiati on, and issuance of an IATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.  0.64	TBD	identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticatio n, confidentiality , and nonrepudiati on, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.
Team Team individual individual	Systems Training	Trained-to- Certify at all	Trained-to- Certify at all	Trained-to- Qualify at		Trained-to- Qualify at

Section)	Section)	(billet/watch	(billetWatch
levels	levels	station)	station)

#### **Requirements Source:**

Littoral Combat Ship (LCS) Flight 0 Capability Development Document (CDD), Joint Requirements Oversight Council Memorandum (JROCM) 083-04, May 25, 2004 LCS Flight 0+ Capability Development Document (CDD), JROCM 126-08, June 17, 2008

#### **Acronyms And Abbreviations**

ATO - Authority to Operate

DAA - Designated Approval Authority

DISR - DoD IT Standards Registry

FT - Feet

GIG - Global Information Grid

IA - Information Assurance

IATO - Interim Authority to Operate

IT - Information Technology

KIP - Key Interface Profile

KTS - Knots

MT - Metric Ton

NCOW RM - Net-Centric Operations Warfare Reference Model

NM - Nautical Miles

TV - Technical View

#### Change Explanations

None

Classified Performance information is provided in the classified annex to this submission.

## Track To Budget

RDT&E			
APPN 1319	BA 04	PE 0603581N	(Navy)
	Project 3096	Littoral Combat Ship/Littoral Combat Ship Development	(Shared)
	Project 4018	Littoral Combat Ship/Littoral Combat Ship Construction	
	Project 9999	Littoral Combat Ship/Revised Acquisition Strategy	(Shared) (Sunk)
	Congressional Add		
Procurement			
APPN 1611	BA 02	PE 0204230N	(Navy)
	ICN 2127	Littoral Combat Ship	
APPN 1611	BA 05	PE 0204230N	(Navy)
	ICN 5110	Outfitting/Post Delivery	(Shared)
APPN 1810	BA 01	PE 0204230N	(Navy)
	ICN 0944 ICN 1320	LCS Class Equipment Seaframe LCS Training	(Shared)
MILCON			
APPN 1205	BA 01	PE 0203176N	(Navy)
	Project 00245500	LCS Training Facility	(Shared)
APPN 1205	BA 03	PE 0901211N	(Navy)
	Project 64482044	Planning	(Shared)

#### Cost and Funding

#### **Cost Summary**

#### **Total Acquisition Cost and Quantity**

	В	Y2010 \$M		BY2010 \$M		TY \$M	
Appropriation	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	3433.3	3433.3	3776.6	3391.4	3481.7	3481.7	3457.3
Procurement	28369.2	28369.2	31206.1	27083.4	33720.5	33720.5	33746.6
Flyaway	28369.2			27083.4	33720.5		33746.6
Recurring	28090.9			27083.4	33401.8		33746.6
Non Recurring_	278.3			0.0	318.7		0.0
Support	0.0			0.0	0.0		0.0
Other Support	0.0			0.0	0.0		0.0
Initial Spares	0.0			0.0	0.0		0.0
MILCON	208.5	208.5	229.4	202.7	236.6	236.6	236.6
Acq O&M	0.0	0.0		0.0	0.0	0.0	0.0
Total	32011.0	32011.0	N/A	30677.5	37438.8	37438.8	37440.5

Confidence Level For the Current APB Cost is 50% - Cost and Funding data represented in this SAR supports the LCS Milestone B Defense Acquisition Board decisions as approved in February 2011 and represents a 50 percent confidence level when considering 27 of the 55 ships of the LCS Seaframe Program will be funded outside the 2013 Future Years Defense Program (FYDP) budget submission.

The estimate to support this program, like most cost estimates, is built upon a product-oriented work breakdown structure based on historical actual cost information to the maximum extent possible, and, most importantly, based on conservative assumptions that are consistent with actual demonstrated contractor and government performance for a series of acquisition programs in which we have been successful.

It is difficult to calculate mathematically the precise confidence levels associated with life-cycle cost estimates prepared for Major Defense Acquisition Programs (MDAP). Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about as likely the estimate will prove too low or too high for the program as described.

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	2	2	2
Procurement	53	53	53
Total	55	55	55

## **Cost and Funding**

## **Funding Summary**

# Appropriation and Quantity Summary FY2013 President's Budget / December 2011 SAR (TY\$ M)

Appropriation	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
RDT&E	2237.4	145.1	233.6	247.6	116.0	39.6	40.3	397.7	3457.3
Procurement	3842.4	1825.0	1886.3	1949.9	2065.6	1201.4	1190.0	19786.0	33746.6
MILCON	0.0	0.0	62.8	0.0	0.0	0.0	0.0	173.8	236.6
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2013 Total	6079.8	1970.1	2182.7	2197.5	2181.6	1241.0	1230.3	20357.5	37440.5
PB 2012 Total	6364.1	2022.0	2049.3	2125.1	2132.7	1799.0	2502.3	18444.3	37438.8
Delta	-284.3	-51.9	133.4	72.4	48.9	-558.0	-1272.0	1913.2	1.7

Quantity	Undistributed	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
Development	2	0	0	0	0	0	0	0	0	2
Production	0	6	4	4	4	4	2	2	27	53
PB 2013 Total	2	6	4	4	4	4	2	2	27	55
PB 2012 Total	2	6	4	4	4	4	3	3	25	55
Delta	0	0	0	0	0	0	-1	-1	2	0

## **Cost and Funding**

## **Annual Funding By Appropriation**

**Annual Funding TY\$** 

1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
2003							35.8
2004							116.8
2005							369.8
2006							384.5
2007							573.1
2008							200.9
2009							197.4
2010							260.1
2011							99.0
2012							145.1
2013							233.6
2014							247.6
2015							116.0
2016							39.6
2017							40.3
2018							26.3
2019							31.5
2020							42.8
2021							43.4
2022							32.6
2023							23.0
2024							31.2
2025							43.5
2026							44.1
2027							32.4
2028							23.3
2029							23.6
Subtotal	2						3457.3

Annual Funding BY\$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 \$M	Non End Item Recurring Flyaway BY 2010 \$M	Non Recurring Flyaway BY 2010 \$M	Total Flyaway BY 2010 \$M	Total Support BY 2010 \$M	Total Program BY 2010 \$M
2003							41.1
2004							130.5
2005							402.7
2006							406.1
2007							590.8
2008							203.4
2009							197.3
2010							256.1
2011							95.6
2012							137.8
2013							218.2
2014							227.3
2015							104.6
2016							35.1
2017							35.1
2018							22.5
2019							26.4
2020							35.3
2021							35.2
2022							25.9
2023							18.0
2024							24.0
2025							32.8
2026							32.7
2027							23.6
2028							16.7
2029							16.6
Subtotal	2						3391.4

Research, Development, Test, and Evaluation (RDT&E) for the LCS Seaframe Program includes the detail design and construction of two Flight 0 ships in addition to the program development, test and evaluation, and sustained engineering.

Annual Funding TY\$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
2006		500.0			500.0		500.0
2007							
2008							
2009	2	1017.0			1017.0		1017.0
2010	2	1079.3			1079.3		1079.3
2011	2	1246.1			1246.1		1246.1
2012	4	1804.3			1804.3		1804.3
2013	4	1845.8			1845.8		1845.8
2014	4	1895.7			1895.7		1895.7
2015	4	2013.6			2013.6		2013.6
2016	2	1146.8			1146.8		1146.8
2017	2	1106.0			1106.0		1106.0
2018	2	1692.4			1692.4		1692.4
2019	2	1339.2			1339.2		1339.2
2020	2	1326.4			1326.4		1326.4
2021	2	1749.2			1749.2		1749.2
2022	2	1218.7			1218.7		1218.7
2023	2	1205.3			1205.3		1205.3
2024	2	1204.8			1204.8		1204.8
2025	2	1883.8			1883.8		1883.8
2026	2	1280.1			1280.1		1280.1
2027	2	1303.2			1303.2		1303.2
2028	2	1291.8			1291.8		1291.8
2029	2	1653.8			1653.8		1653.8
2030	2	1509.1			1509.1		1509.1
2031	1	810.6			810.6		810.6
2032		101.3			101.3		101.3
2033		116.7			116.7		116.7
2034		60.8			60.8		60.8
Subtotal	53	33401.8			33401.8		33401.8

Annual Funding BY\$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 \$M	Non End Item Recurring Flyaway BY 2010 \$M	Non Recurring Flyaway BY 2010 \$M		Total Support BY 2010 \$M	Total Program BY 2010 \$M
2006		535.8			535.8		535.8
2007							
2008							
2009	2				984.7		984.7
2010	2				1020.2		1020.2
2011	2	1155.4			1155.4		1155.4
2012	4	1644.5			1644.5		1644.5
2013	4	1653.7			1653.7		1653.7
2014	4	1668.7			1668.7		1668.7
2015	4	1741.1			1741.1		1741.1
2016	2	974.1			974.1		974.1
2017	2	922.8			922.8		922.8
2018	2	1387.1			1387.1		1387.1
2019	2	1078.2			1078.2		1078.2
2020	2	1049.0			1049.0		1049.0
2021	2	1359.0			1359.0		1359.0
2022	2	930.1			930.1		930.1
2023	2	903.6			903.6		903.6
2024	2	887.2			887.2		887.2
2025	2	1362.7			1362.7		1362.7
2026	2	909.7			909.7		909.7
2027	2	909.7			909.7		909.7
2028	2	885.8			885.8		885.8
2029	2				1114.0		1114.0
2030	2	998.5			998.5		998.5
2031	1	526.9			526.9		526.9
2032		64.7			64.7		64.7
2033		73.2			73.2		73.2
2034		37.5			37.5		37.5
Subtotal	53	26777.9			26777.9		26777.9

Cost Quantity Information 1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2010 \$M
2006		
2007		
2008		
2009	2	1610.0
2010	2	1077.4
2011	2	1146.7
2012	4	1796.9
2013	4	1747.9
2014	4	1780.0
2015	4	1809.0
2016	2	1011.0
2017	2	885.5
2018	2	1322.2
2019	2	1050.1
2020	2	1012.1
2021	2	1314.2
2022	2	891.9
2023	2	906.8
2024 2025	2	896.4 1312.7
2025	2	896.3
2020	2	870.3
2028	2	884.1
2029	2	1083.4
2030	2	1000.0
2031	1	473.0
2032		
2033		
2034		
Subtotal	53	26777.9

# Annual Funding TY\$ 1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
2012			20.7		20.7		20.7
2013			40.5		40.5		40.5
2014			54.2		54.2		54.2
2015			52.0		52.0		52.0
2016			54.6		54.6		54.6
2017			84.0		84.0		84.0
2018			38.8		38.8		38.8
Subtotal			344.8		344.8		344.8

Annual Funding BY\$
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 \$M	ecurring Recurring Flyaway Flyaway BY 2010 \$M BY 2010 \$M Flyaway		Total Support BY 2010 \$M	Total Program BY 2010 \$M	
2012			19.5		19.5		19.5
2013			37.4		37.4		37.4
2014			49.2		49.2		49.2
2015			46.4		46.4		46.4
2016			47.9		47.9		47.9
2017			72.3		72.3		72.3
2018			32.8		32.8		32.8
Subtotal			305.5		305.5		305.5

# Annual Funding TY\$ 1205 | MILCON | Military Construction, Navy and Marine Corps

Fiscal Year	Total Program TY \$M
2013	•
2014	
2015	
2016	
2017	
2018	173.8
Subtotal	236.6

Annual Funding BY\$
1205 | MILCON | Military Construction,

**Navy and Marine Corps** 

Fiscal Year	Total Program BY 2010 \$M
2013	57.4
2014	
2015	
2016	
2017	
2018	145.3
Subtotal	202.7

#### **Low Rate Initial Production**

	Initial LRIP Decision	Current Total LRIP
Approval Date	2/18/2011	2/18/2011
<b>Approved Quantity</b>	24	24
Reference	ADM	ADM
Start Year	2005	2005
End Year	2015	2015

The current total Low Rate Initial Production (LRIP) quantity is more than 10% of the total production quantity due to the Milestone B decision that includes the ships through FY 2015 in order to cover the LCS Seaframe program requirements up to the Full Rate Production (FRP) acquisition decision planned for FY 2015.

The LRIP decision of 24 ships includes two ships procured with Research, Development, Test and Evaluation (RDT&E), two ships procured in FY 2009, and the 20 ships being procured in a block buy arrangement in FY 2010 through FY 2015.

## **Foreign Military Sales**

None

#### **Nuclear Cost**

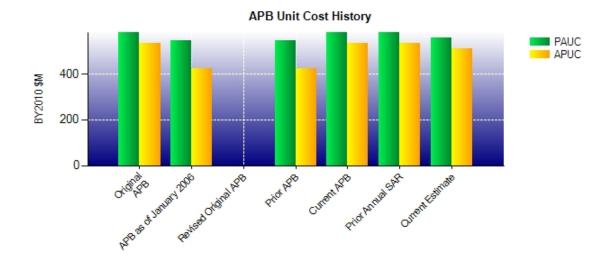
None

### **Unit Cost**

## **Unit Cost Report**

/2010 \$M	BY2010 \$M	
aseline	Current Estimate (DEC 2011 SAR)	BY % Change
32008.2	30677.5	
55	55	
581.967	557.773	-4.16
28369.2	27083.4	
53	53	
535.268	511.008	-4.53
′2010 \$M	BY2010 \$M	
(2010 \$M ginal UCR saseline (2011 APB)	BY2010 \$M  Current Estimate (DEC 2011 SAR)	BY % Change
ginal UCR saseline	Current Estimate	
ginal UCR saseline	Current Estimate	
ginal UCR saseline 2011 APB)	Current Estimate (DEC 2011 SAR)	
ginal UCR saseline 2011 APB) 32008.2	Current Estimate (DEC 2011 SAR)	
ginal UCR saseline 2011 APB) 32008.2 55	Current Estimate (DEC 2011 SAR) 30677.5 55	% Change
ginal UCR saseline 2011 APB) 32008.2 55	Current Estimate (DEC 2011 SAR) 30677.5 55	% Change
ginal UCR saseline 2011 APB) 32008.2 55 581.967	Current Estimate (DEC 2011 SAR) 30677.5 55 557.773	% Change
	55 581.967 28369.2 53	32008.2 30677.5 55 55 581.967 557.773 28369.2 27083.4 53 53

### **Unit Cost History**



		BY2010 \$M		TY	\$M
	Date	PAUC	APUC	PAUC	APUC
Original APB	APR 2011	582.018	535.268	680.705	636.236
APB as of January 2006	MAY 2004	547.200	424.450	502.925	400.000
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	MAY 2004	547.200	424.450	502.925	400.000
Current APB	APR 2011	582.018	535.268	680.705	636.236
Prior Annual SAR	DEC 2010	581.760	535.170	680.705	636.236
Current Estimate	DEC 2011	557.773	511.008	680.736	636.728

#### **SAR Unit Cost History**

#### **Current SAR Baseline to Current Estimate (TY \$M)**

Initial PAUC	Changes							PAUC	
Dev Est	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Current Est
680.705	21.895	0.000	9.233	0.000	-31.097	0.000	0.000	0.031	680.736

#### **Current SAR Baseline to Current Estimate (TY \$M)**

Initial APUC	PUC Changes							APUC	
Dev Est	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Current Est
636.236	22.202	0.000	9.804	0.000	-31.513	0.000	0.000	0.493	636.728

## **SAR Baseline History**

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	MAY 2004	MAY 2004	N/A	MAY 2004
Milestone B	JAN 2007	FEB 2011	N/A	FEB 2011
Milestone C	DEC 2010	JAN 2012	N/A	MAY 2012
IOC	OCT 2007	JAN 2014	N/A	JAN 2014
Total Cost (TY \$M)	1211.7	37438.8	N/A	37440.5
Total Quantity	2	55	N/A	55
Prog. Acq. Unit Cost (PAUC)	605.850	680.705	N/A	680.736

### **Cost Variance**

## **Cost Variance Summary**

Summary Then Year \$M								
	RDT&E	Proc	MILCON	Total				
SAR Baseline (Dev Est)	3481.7	33720.5	236.6	37438.8				
Previous Changes								
Economic								
Quantity								
Schedule								
Engineering								
Estimating								
Other								
Support								
Subtotal								
Current Changes								
Economic	+22.0	+1176.7	+5.5	+1204.2				
Quantity								
Schedule	-6.3	+519.6	-5.5	+507.8				
Engineering								
Estimating	-40.1	-1670.2		-1710.3				
Other								
Support								
Subtotal	-24.4	+26.1		+1.7				
Total Changes	-24.4	+26.1		+1.7				
CE - Cost Variance	3457.3	33746.6	236.6	37440.5				
CE - Cost & Funding	3457.3	33746.6	236.6	37440.5				

Summary Base Year 2010 \$M								
	RDT&E	Proc	MILCON	Total				
SAR Baseline (Dev Est)	3433.3	28369.2	208.5	32011.0				
Previous Changes								
Economic								
Quantity								
Schedule								
Engineering								
Estimating	-6.5	-5.2	-2.5	-14.2				
Other								
Support								
Subtotal	-6.5	-5.2	-2.5	-14.2				
Current Changes								
Economic								
Quantity								
Schedule	+0.9		-3.3	-2.4				
Engineering								
Estimating	-36.3	-1280.6		-1316.9				
Other								
Support								
Subtotal	-35.4	-1280.6	-3.3	-1319.3				
Total Changes	-41.9	-1285.8	-5.8	-1333.5				
CE - Cost Variance	3391.4	27083.4	202.7	30677.5				
CE - Cost & Funding	3391.4	27083.4	202.7	30677.5				

Previous Estimate: December 2010

RDT&E	\$1	Л
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+22.0
Revised estimate for proper phasing of Research and Development activities. (Schedule)	+0.9	-6.3
Adjustment for current and prior escalation. (Estimating)	-4.2	-4.3
Revised estimate for Congressional reductions in FY 2011. (Estimating)	-17.6	-18.2
Adjustment to reflect the application of new outyear escalation indices. (Estimating)	-14.5	-17.6
RDT&E Subtotal	-35.4	-24.4

Procurement	\$N	Λ
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+1176.7
Revised Navy 30 year shipbuilding plan. (Schedule)	0.0	+519.6
Adjustment for current and prior escalation. (Estimating)	-132.5	-142.3
Revised estimate for proper phasing of LCS trainer requirements. (Estimating)	+29.5	+21.1
Reductions due to Congressional action in FY 2011 and FY 2012. (Estimating)	-246.6	-266.0
Revised estimate for Seaframe pricing and phasing of requirement. (Estimating)	-931.0	-1283.0
Procurement Subtotal	-1280.6	+26.1

MILCON	\$M		
Current Change Explanations	Base Year	Then Year	
Revised escalation indices. (Economic)	N/A	+5.5	
Revised estimate for proper phasing of Military Construction requirements. (Schedule)	-3.3	-5.5	
MILCON Subtotal	-3.3	0.0	

#### **Contracts**

#### **Appropriation: Procurement**

Contract Name Construction - LCS 3

Contractor Location Lockheed Martin
2323 Eastern Blvd
Baltimore, MD 21220

Contract Number, Type N00024-09-C-2303/101, FPIF

Award Date March 23, 2009
Definitization Date March 23, 2009

Initial Co	ntract Price (	(\$M)	Current C	ontract Price	ntract Price (\$M) Estimated Price At Completion		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
383.2	450.4	1	393.1	461.9	1	391.6	393.1

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-5.7	-5.1
Previous Cumulative Variances	+11.1	-5.5
Net Change	-16.8	+0.4

#### Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to lower than expected performance as the ship progressed towards trials.

The favorable net change in the schedule variance is due to the completion of shipboard testing and compartment closeout as the ship prepares for delivery to the Navy.

#### **Contract Comments**

This contract is more than 90% complete; therefore, this is the final report for this contract.

The difference between the initial contract price target and the current contract price target is due to the execution of change order budget on the contract and the penalty for not awarding the FY 2010 ship on this contract.

This report contains the construction Contract Line Item Number (CLIN) 0101 only. It does not include the value of material reused from the FY 2006 terminated ship contracts.

Contract Name
Construction - LCS 4
Contractor
General Dynamics
Contractor Location
700 Washington St

Bath, ME 04530

Contract Number, Type N00024-09-C-2302/101, FPIF

Award Date May 01, 2009
Definitization Date May 01, 2009

Initial Co	ntract Price (	(\$M)	Current C	Current Contract Price (\$M) Estimated Price At Complet			rice At Completion (\$M)
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
357.2	410.2	1	375.8	431.3	1	392.7	410.0

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-28.7	-18.8
Previous Cumulative Variances	-12.8	-14.8
Net Change	-15.9	-4.0

#### **Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to the rework caused by the increase in unskilled labor required to meet the requirements of the multiple shipbuilding projects currently under construction in the shipyard.

The unfavorable net change in the schedule variance is due to the late development of work packages and construction drawings needed to support construction. This late development and release of drawings has resulted in a schedule slip of approximately nine months.

#### **Contract Comments**

The difference between the initial contract price target and the current contract price target is due to the execution of change order budget on the contract and the penalty for not awarding the FY 2010 ship on this contract.

This report contains the construction Contract Line Item Number (CLIN) 0101 only. It does not include the value of material reused from the FY 2006 terminated ship contracts.

Contract Name **Construction - LCS 5** 

Contractor Lockheed Martin **Contractor Location** 2323 Eastern Blvd

Baltimore, MD 21220

N00024-11-C-2300/1, FPIF Contract Number, Type

Award Date December 29, 2010 **Definitization Date** December 29, 2010

Initial Cor	ntract Price (	(\$M)	Current Contract Price (\$M)			Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
436.8	498.1	1	438.6	499.7	1	431.6	438.6	

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	+0.3	-9.7
Previous Cumulative Variances	0.0	0.0
Net Change	+0.3	-9.7

#### **Cost And Schedule Variance Explanations**

The favorable net change in the cost variance is due to lower than budgeted expenditures.

The unfavorable net change in the schedule variance is due to material being time phased too early in the baseline.

#### **Contract Comments**

The difference between the initial contract price target and the current contract price target is due to the execution of change order budget on the contract.

Ceiling Price corrected from prior SAR.

Contract Name Construction - LCS 6

Contractor Austal USA
Contractor Location 1 Dunlap Dr.

Mobile, AL 36601

Contract Number, Type N00024-11-C-2301/1, FPIF

Award Date December 29, 2010
Definitization Date December 29, 2010

Initial Co	ontract Price	(\$M)	Current Contract Price (\$M)		Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
432.0	480.4	1	432.1	480.4	1	432.1	432.1

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-3.5	-17.3
Previous Cumulative Variances	0.0	0.0
Net Change	-3.5	-17.3

#### **Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to higher than anticipated material costs.

The unfavorable net change in the schedule variance is due to the late approval of the schedule baseline caused by the Production Readiness Review being conducted later than planned.

#### **Contract Comments**

The difference between the initial contract price target and the current contract price target is due to the execution of change order budget on the contract.

Ceiling Price corrected from prior SAR.

Contract Number, Type

Contract Name Construction - LCS 7

Contractor Location Lockheed Martin
2323 Eastern Blvd
Baltimore, MD 21220

N00024-11-C-2300/2, FPIF

Award Date March 17, 2011
Definitization Date March 17, 2011

Initial Cor	ntract Price (	(\$M)	Current Contract Price (\$M)		Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
376.6	430.4	1	377.8	431.7	1	369.0	377.8

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	+4.0	-0.7
Previous Cumulative Variances		
Net Change	+4.0	-0.7

#### **Cost And Schedule Variance Explanations**

The favorable cumulative cost variance is due to lower than budgeted expenditures.

The unfavorable cumulative schedule variance is due to material being time phased too early in the baseline.

#### **Contract Comments**

The difference between the initial contract price target and the current contract price target is due to the execution of change order budget on the contract.

This is the first time this contract is being reported.

Contract Name Construction - LCS 8

Contractor Austal USA Contractor Location 1 Dunlap Dr

Mobile, AL 36601

Contract Number, Type N00024-11-C-2301/2, FPIF

Award Date March 17, 2011
Definitization Date March 17, 2011

	Initial Co	ntract Price (	(\$M)	Current Contract Price (\$M)		Estimated Price At Completion (\$M)		
	Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
_	368.6	405.7	1	368.6	405.7	1	368.6	368.6

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	0.0	0.0
Previous Cumulative Variances		
Net Change	+0.0	+0.0

#### **Cost And Schedule Variance Explanations**

None

#### **Contract Comments**

This is the first time this contract effort is being reported. Variance reporting will be provided upon completion of the Integrated Baseline Review (IBR). The baseline cost performance report for this contract effort has not yet been developed and delivered to the Government. Reporting will begin with the next SAR.

## **Deliveries and Expenditures**

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	2	2	2	100.00%
Production	0	0	53	0.00%
Total Program Quantities Delivered	2	2	55	3.64%

Expenditures and Appropriations (TY \$M)					
Total Acquisition Cost	37440.5	Years Appropriated	10		
Expenditures To Date	3484.8	Percent Years Appropriated	31.25%		
Percent Expended	9.31%	Appropriated to Date	8049.9		
Total Funding Years	32	Percent Appropriated	21.50%		

LCS Seaframe deliveries and expenditures current as of January 31, 2012.

#### **Operating and Support Cost**

#### **Assumptions And Ground Rules**

- a) 55 Seaframes with an average Service life of 25 years
- b) 83 Crews (40 personnel: 8 Officers /32 Enlisted per crew)
- c) Steaming Hours underway/not underway (4421 underway/718 not underway)
- d) Defense Energy Support Center (DESC) Price of Fuel (Constant Year 2010) \$117.60/barrel
- e) Government Furnished Equipment (GFE) and Contractor Furnished Equipment (CFE) systems configurations are based on the equipment selected by each contractor

Costs BY2010 \$M					
Cost Element	LCS 55 Seaframes average annual cost per ship	No Antecedent N/A			
Unit-Level Manpower	7.4				
Unit Operations	8.1				
Maintenance	6.1				
Sustaining Support	5.2				
Continuing System Improvements	7.2				
Indirect Support	2.6				
Other	0.0				
Total Unitized Cost (Base Year 2010 \$)	36.6				

Total O&S Costs \$M	LCS	No Antecedent
Base Year	50479.0	
Then Year	87089.3	

Source of estimate is the Navy Service Cost Position and the OSD Independent Cost Estimate developed and approved in support of the LCS Seaframe Milestone B decision in February, 2011.

There is no Antecedent for LCS.

The difference between total Operating and Support (O&S) cost and the average annual cost per ship is approximately \$145 million of disposal costs for 55 ships. The additional nine million difference is attributable to a small variance in the calculation of the annual cost per hull.